

DETERMINING LEVELS OF SUBSTANCES USING MULTISTATIC PROBES

ABSTRACT

5 The disclosed technology pertains to multistatic probes that can determine a level of one or more substances. A multistatic probe can include transmitting and receiving conductive elements that are electrically distinct and which are capable of conveying electromagnetic energy in proximity to/from substances of interest. The conductive elements can be arranged to be adjacent to a coupler that is positioned at a dielectric mismatch boundary between substances of interest, whereby an electromagnetic signal transmitted on the transmitting conductive element causes a change in capacitance in the transmitting conductive element upon the electromagnetic signal traversing a part of the transmitting conductive element substantially adjacent to the coupler, which causes a corresponding electromagnetic signal to be coupled to the receiving conductive element. Attributes of the received electromagnetic signal can be evaluated relative to the transmitted electromagnetic signal to determine a level associated with one or more of the substances of interest.

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